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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,772	09/24/2003	Thomas M. Barbara	03-03 US	4369

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Varian Inc.
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EXAMINER	
VIJAYAKUMAR, KALLAMBELLA M	
ART UNIT	PAPER NUMBER
1793	
MAIL DATE	DELIVERY MODE
10/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/669,772	BARBARA ET AL.	
	Examiner	Art Unit	
	Kallambella Vijayakumar	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *5,6 and 16-19* is/are withdrawn from consideration.

5)☒ Claim(s) *1-4 and 7-10* is/are allowed.

6)☒ Claim(s) *11-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/10/2007 has been entered.

Claims 1 and 7-9 were amended. Claims 5-6 and 16-19 withdrawn from consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 11-12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halverson et al (US 3,377,292).

The use of phrase "to exhibit a desired susceptibility at cryogenic temperature " in the claim has not been treated with patentability. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a

manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

Halverson discloses a photoluminescent composition containing a lanthanide chelate such as Gd-ethyl stearoylacetate incorporated in a solid plastic (Cl-1, Ln 22-23; Cl-3, Ln 24-30, 46-75). With regard to method step in claim 11, the prior art teaches making the composition by mixing the components that are either same or substantially same as that claimed by the applicants (Cl-15, Ex-29). With regard to property of the resultant composition having a nearly zero magnetic susceptibility at cryogenic temperatures, the prior art composition is either same or substantially same as that claimed by the applicants, and further made by an identical process, where by dispersion of Gd^{3+} in the polymer matrix and the instant claimed properties including a nearly zero value of magnetic susceptibility in claim 11 will be inherent in the prior art composition, because identical compositions possess identical properties. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). With regard to claim 14, the prior art teaches a composition containing an epoxy resin and making it (Cl-15, Ex-29, Ln 45). All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 11-13 and 15 are rejected under 35 U.S.C. 102(e/a) as being anticipated by Hofacker et al US 2003/0125576).

Hoffacker et al teach an aliphatic oligocarbonate polyol prepared by the transesterification of organic oligocarbonate with aliphatic polyol in presence of a catalyst comprising Gd-tris(2,2,6,6-tetramethyl-3,5,heptane dionate) <Gd (TMHD)> (Abstract; Pg-2, Para 0017). The catalyst was used either as a solid or in solution in an amount of 0.01-10,000 PPM (Para 0018-19) that inherently mixes homogeneously and incorporated in the resultant composition. With regard to method step in the claims, the prior art teaches making the composition by mixing the components that are either same or substantially same as that

claimed by the applicants (Para 0020, 0029). With regard to property of the resultant composition having a nearly zero magnetic susceptibility at cryogenic temperatures, the prior art composition is either same or substantially same as that claimed by the applicants, and further made by an identical process, where by dispersion of Gd^{3+} in the polymer matrix and the instant claimed properties including a nearly zero value of magnetic susceptibility in claim 11 will be inherent in the prior art composition, because identical compositions possess identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

3. Claims 11 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Mallener et al (US 4,756,869).

Mallener et al teach a coating containing epoxy resin lacquer and gadolinium oxide (C-5, Ex-2). Gadolinium oxide meets the limitation of a metal ion containing Gd (III) and a ligand over the applicant's disclosure of its addition in borosilicate glass (Spec: US 2005/0062022; Para 0053). With regard to property of the resultant composition having a nearly zero magnetic susceptibility at cryogenic temperatures, the prior art composition is either same or substantially same as that claimed by the applicants, and further made by an identical process, where by dispersion of Gd^{3+} in the polymer matrix and the instant claimed properties including a nearly zero value of magnetic susceptibility in claim 11 will be inherent in the prior art composition, because identical compositions possess identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
> The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Halverson et al (US 3,377,292) in view of Zheng et al (J. Mater. Chem, 2001,11, 2615-2619).

The disclosure on the composition and method of making the composition by Halverson et al as set forth in rejection-1 under 35 USC 102(b) is herein incorporated.

The prior art teaches various diketonates of lanthanides in the composition, but is silent about the specific diketonates in the composition.

In the analogous art, Zheng et al teach electroluminescence properties of Tb and Gd diketonates including Gd(acac)3 (Title, Abstract, Page 2617, C-1, para-2, Fig-4) (Also, See Abstracts from Yinping et al and Deqing et al, J. RareEarths, 2004.2: for photoluminescence of Gd Chelates).

It would have been obvious to a person of ordinary skill in the art to substitute the Gd chelate in the composition of Halverson et al with the Gd(acac)3 of Zheng et al as functional equivalent with reasonable expectation of success, because the teachings are in the analogous art of photoluminescence materials.

Allowable Subject Matter

Claims 1-4 and 7-10 allowed.

The prior art of record neither teaches nor fairly suggest a composition of matter with the structure of the applicants.

Response to Arguments

Applicant's arguments filed 08/10/2007 have been fully considered but they are not persuasive. With regard to the argument that "... has nearly zero magnetic susceptibility at said cryogenic temperatures" has not been given due consideration is not persuasive because, the instant claim-11 as recited requires mixing Gd3+, Fe3+, and Mn3+ with an amorphous matrix and a ligand forming a composition with a specific magnetic property, wherein the prior art teaches such a mixing of components that are either same or substantially same as that claimed by the applicants, and has been addressed in detail in the above cited rejections (Response, Pg-6, Para-3). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicants fail to show that prior art process does not result in such a composition. Applicants fail to show that Halverson's process results in a materially different product than that claimed by the applicants, and hence the rejection over this prior art is maintained. Applicants are invited to call the examiner to discuss the patentability issues of the rejected claims.

For the reasons set forth above, applicants fail to patentably distinguish their process over the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 6.30-4.00 Mon-Thu, 6.30-2.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KMV/
October 12, 2007.

STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700